Memo

Quality Control

D3929-041 \*N900040100\* Item ID: Accept Setup Start **Revision ID:** Stop Item Name: Gusset Assembly \*4\* **Start Date:** 10/18/12 Start Qty: 4.00 **Cust Item ID:** Required Date: 11/02/12 Req'd Qty: 4.00 **Customer:** Reference: Run Start Date 2-10-18 Tooling: **Process Plan:** Approvals: Date: Stop Date: QC: SPC (Y/N): Date: Sequence ID/ Reject Operation Set Up/ Tool ID Tool # Plan Accept Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp Draw Nbr **Revision Nbr** D3929 Rev A 100 0.00 \*100\* Jm 12-10-19 0.00 Waterjet Memo FLOW CNC Waterjet 1-Cut as per Dwg D3929 Dwg Rev:\_\_\_\_\_ 304,125" Prog Rev: 2-Deburr if necessary 110 QC2- Inspect parts off machine FAI/FAIB 0.00 \*110\* Jm 12-10-19 QC 0.00

NCR: Y	es / No				WORK ORDER NON-O		NFORM	AANCE / UPDA	ATE			
					,					QA Closed:	Date	2:
Work Orde	r:	,			DISPOSITION				AGAINST DEI	PARTMENT	<b>PROCESS</b> Water Jet	Engineering
Part N NCR N					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Small Fab Finishing Composite		d. Eng. Coor. e/Packaging Supplier	Quality Other
Root Cause	Date	Step	Qty		ption of work order update or Non-conformance		nitial ief Eng	Actio Descrip		Sign & Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved					·		(+)		·			
						AUL	T CATE	GORY				
Landin	Bending Centre N Cracks Crushed Cuffs Heat Tre Inspection Ripples in	/Crimped at on Strip in n Bend	Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/Un enance eled	nclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
1	Torque V	Vaves in I	Extrusion	1	Drawing		1Out of (	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

Work Orde		530		*916	30*					Page 2
tem ID: Revision ID: Item Name:	D3929-041 Gusset Assemb	nly		Accept	*N9000	40100	* s	Setup Star		S1* S2*
Start Date: Required Date: Reference:	10/18/12 11/02/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*		Cust Item ID: Customer:					
Approvals:		n:			Date:		R	Run Star Stop		R1* R2*
Sequence ID/ Work Center II 120 *120* QC Quality Control		Operation Description QC8- Inspect parts - sec	ond check	Set Up/ Run Hours 0.00 Sml> 0.00		ool # Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 <b>*1⊿∩*</b> Large Fab Large Fab			ngs D3907-1 as per dwg D batch: _M /よよ 3 5			(x	<u>Y</u> _	12/1.	<u>/2/</u>	MAL
150 *150* QC		QC9- Inspect visual per	QSI004- Fusion Welds	0.00			0	13-12	· <i>31</i>	045)

Quality Control

										DQA:	Date:	
NCR:	res / N	0			WORK ORDER NON-	COI	VFOR	MANCE / UP	DATE			
										QA Closed:	Date:	
Morle Orde					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Work Orde	er				Rework	٦ .		Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	do				Scrap	1	١ ,	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
raiti	···				Use-as-is	1		noforming	Finishing	-	re/Packaging	Other
NCR I	No.				Work Order Update	-	,,,,,,,,,	Large Fab	Composite	1	Supplier	1
									, <u>L</u>	_	' ' '	
Root				Descri	iption of work order update		Initial	Act	ion	Sign &		
Cause	Dat	e Step	Qty		or Non-conformance	Ch	nief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data								-				
Equip/Tooling												
Operator												
Material												
Setup				ļ.								
Other	·											
Process												
Supplier						1						
Training												
Unapproved			<u> </u>	-9								
						AUI	LT CATE	GORY			·	
Landi	ng Gear				General	_	1		Γ	7	Γ	7
	Bendi	•			Bend	<u> </u>	Grain		-	Ovalized	ļ	Pressure/Forced
	$\vdash$	e Not Conc	entric to	o/s	BOM/Route	_	Hardwa		<u> </u>	Over/Under	<del>-</del>	Temperature/Cure
	Crack			<u></u>	Broken/Damaged	_	<b>⊣</b> '	ion Incomplete		Part Incorre	<u> </u>	Weld
		ed/Crimpe	d.	_	Burrs	_	4	tions Incomplete/l	Jnclear	Part Lost/M		Wrong Stock Pulled
	Cuffs				Contamination		Mainte	enance		Part Moved		

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Positioned Wrong

Power Loss/Surge

Other

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Work Order ID 91630 \*91630\* Page 3 October-18-12 9:07:53 AM \*N900040100\* Item ID: D3929-041 Accept Setup Start **Revision ID:** Gusset Assembly Item Name: 10/18/12 Start Qty: 4.00 **Start Date: Cust Item ID:** Required Date: 11/02/12 Req'd Qty: 4.00 **Customer:** Reference: Run Process Plan: Date: **Tooling: Approvals:** Date: Stop Date: QC: SPC (Y/N): Date: Tool # Plan Sequence ID/ Operation Tool ID Accept Reject Reject Set Up/ Insp. Work Center ID Description Code Number Qty **Qty** Stamp **Run Hours** 160 QC5- Inspect part completeness to step on W/O 0.00 \*160\* 0.00 QC Memo Quality Control Identify as per dwg & Stock Location: WAGJU 170 12-12-21 MAL \*170\* 0.00 Packaging Memo Packaging QC21- Final Inspection - Work Order Release 0.00 180 \*180\* 0.00 QC

Memo

Quality Control

13/11/04x) NNF -12-27

										DQ	٦ ٥	ate:	
'es	/ No	,			WORK ORDER NON-C	ON	NFORN	MANCE / UPE	DATE	QA Close	d: D	ate:	
					DISPOSITION				AGAINST DE				
er: _ lo lo					Work Order Update			Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Composite			rod. Eng. Coor tore/Packagin	g	Engineering Quality Other
				Descri	ption of work order update	1	nitial	Act	ion	Sign &			
	Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verificati	on	QC Inspector
,													
					<del></del>	AUL	T CATE	GORY					
	Bending Centre No Cracks Crushed/C Cuffs Heat Trea nspection	Crimped t n Strip in		O/S	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Inspecti Instruct Mainte Mislabe Misread	on Incomplete ions Incomplete/U nance rled	Jnclear	Part Incor Part Lost/ Part Mov Positione	rrect 'Missing ed d Wrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	ng G	Date  Date  Date  Gear  Bending  Centre No  Cracks  Crushed/O  Cuffs  Heat Trea  Inspection	Date Step  Date Step  Date Step  Date Step  Cracks Crushed/Crimped Cuffs Heat Treat	Date Step Qty  Date Step Qty  Date Step Qty  Date Step Qty  Consense Concentric to Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube	Date Step Qty Company	DISPOSITION  Rework Scrap Use-as-is Work Order Update  Date Step Oty Description of work order update or Non-conformance  Fing Gear General  Bending Bending Bend BOM/Route  Centre Not Concentric to O/S BOM/Route  Cracks Broken/Damaged  Crushed/Crimped Burrs  Cuffs Contamination  Cuffs Countersink  Inspection Strip in Tube Cut Too Short	DISPOSITION  Rework   Scrap   Use-as-is   Work Order Update    Date   Step   Qty   Description of work order update   Or Non-conformance   Chapter   Chapter	DISPOSITION  Rework Scrap Use-as-is Work Order Update  Date Step Qty Description of work order update or Non-conformance  FAULT CATE  General  Bending General  Bending General  Bend General  Bend General  Centre Not Concentric to O/S BOM/Route  Cracks Broken/Damaged Inspection of Survey Contamination  Cracks Crushed/Crimped.  Cuffs Contamination Mainter General  Bend Grain  Hardwa  Inspection Strip in Tube Countersink Mislabe  Inspection Strip in Tube  Disposition  Rework Scrap Them  Scrap Them  Rework Scrap Them  Sc	DISPOSITION Rework Scrap Use-as-is Work Order Update Unitial Act Date Step Qty Or Non-conformance Chief Eng Descr    Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr   Date Step Qty Or Non-conformance Chief Eng Descr	DISPOSITION  Rework   Scrap   Wachining   Small Fab   Composite    No.   Description of work order update   Initial   Action    Date   Step   Qty   Or Non-conformance   Chief Eng   Description    Date   Step   Qty   Or Non-conformance   Chief Eng   Description    FAULT CATEGORY  General   Bending   Bend   Grain    Centre Not Concentric to O/S   BOM/Route   Hardware    Cracks   Broken/Damaged   Instructions Incomplete    Cracks   Burrs   Instructions Incomplete    Cutf S   Contamination   Maintenance    Heat Treat   Countersink   Mislabeled    Inspection Strip in Tube   Cut Too Short   Misread    AGAINST DE Skid-tube   Crosstube    Skid-tube   Crosstube   Skid-tube   Crosstube    Skid-tube   Crosstube   Skid-tube   Machining   Small Fab    Skid-tube   Crosstube   Skid-tube   Crosstube    Skid-tube   Crosstube   Skid-tube   Crosstube    Skid-tube   Crosstube   Skid-tube   Crosstube    Fault CATEGORY  Skid-tube   Crosstube   Skid-tube   Crosstube    Skid-tube   Crosstube   Skid-tube   Crosstube    Skid-tube   Skid-tube   Crosstube    Skid-tube   Skid-tube   Crosstube    Skid-tube   Skid-tube   Crosstube    Fault CATEGORY  Skid-tube   Crosstube    Machining   Skid-tube   Crosstube    Skid-tube   Skid-tube   Crosstube    Skid-tube   Crosstube    Skid-tube   Machining   Skid    Skid-tube   Crosstube    Ski	AGAINST DEPARTMEN  Rework   Skid-tube   Crosstube   Machining   Small Fab   Permotorming   Finishing   Rec/Si    Date   Step   Qty   Or Non-conformance   Chief Eng   Description   Date    Bending   Bend   Grain   Qvalized   Centre Not Concentric to O/S   BOM/Route   Hardware   Instructions Incomplete   Part Incomplete   Crushed/Crimped.   Contamination   Maintenance   Part Move   Part Move   Cuffs   Contamination   Maintenance   Part Move   Misead   Positione   Position	DISPOSITION  Rework Scrap Use-as-is Work Order Update Date Step Qty Or Non-conformance Centre Not Concentric to O/S Centre Not Concentric to O/S Cracks Cracks Cracks Cracks Cracks Cracks Cuffs Contamination Customs Step Countersink Countersink Countersink Countersink Countersink Countersink Countersink Countersink Missead Misread Mi	DISPOSITION  Rework Scrap Use-as-is Work Order Update Date  Date Step Qty Or Non-conformance Date  FAULT CATEGORY  General Bending Centre Not Concentric to O/S Cracks Date  Centre Not Concentric to O/S Cracks Date  Bown/Route Bown/Damaged Centre Not Concentric to O/S Cracks Date  Cracks Disposition  Disposition  Rework Scrap Water Jet Machining Small Fab Prod. Eng. Coor. Rec/Store/Packaging Finishing Composite Supplier  Nachining Small Fab Prod. Eng. Coor. Rec/Store/Packaging Finishing Composite Supplier  FAULT CATEGORY  General Grain Date Verification  FAULT CATEGORY  General Grain Ovalized Over/Under tolerance Instructions Incomplete Part Incorrect Instructions Incomplete Instructions Incomplete Part Incorrect Instructions Incomplete Part Incorrect Instructions Incomplete Part Incorrect Instructions Incomplete Part Incorrect Part Moved Heat Treat Countersink Missead Power Loss/Surge Inspection Strip in Tube Cut Too Short Missead Power Loss/Surge Power Loss/Surge

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

## **Picklist Print**

October-18-12 9:07:53 AM

Work Order ID:

91630

Parent Item:

D3929-041

Parent Item Name:

Gusset Assembly

**Start Date:** 10/18/12

Required Date: 11/02/12

Page 1

Start Qty: 4.00

Required Qty: 4.00

## **Comments:**

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA 304/316 0.125 Sheet		Purchased	No			100	sf	175.3500	0.45	1.8947368			Jmor-10
				<b>Location</b>		Loc Qty	Lo	c Code					
				MAT020		175.35							
				122	521	175.35			12	2521			
D3907-1		Manufactured	No			130	Each	37.0000	2	8			
Bushing													
				Location		Loc Qty	<u>Lo</u>	c Code					
				WA		37							
				888	91————————————————————————————————————	\frac{1}{36}				8) -1	2/12/	Q1 =	MAL

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	100	VFORM	ANCE / UP	DATE		<del></del>	
											QA Closed:	Date:	
Work Ord	ar:	1. 1=11				DISPOSITION				AGAINST DE	PARTMENT,	/PROCESS	
vvork Ord	er.			<del></del> -		Rework	7		Skid-tube	Crosstube	1	Water Jet	Engineering
Part	Nο					Scrap	1	8	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, , , ,		~~				Use-as-is	1		noforming	Finishing	-	re/Packaging	Other
NCR	No.					Work Order Update	1		Large Fab	Composite	1	Supplier	
							_	i					
Root					1	ption of work order update	1	Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data	_												
Equip/Tooling	$ldsymbol{ldsymbol{ldsymbol{eta}}}$				1								
Operator				<b> </b>			1						
Material								:					
Setup	<u> </u>	4.										40	
Other	$\vdash$												
Process						•							
Supplier	$\vdash$						1						
Training	$\vdash$												
Unapproved	1				L			LT CATE	CORV.				ــــــــــــــــــــــــــــــــــــــ
Land	ing (	Gear				General	701	LI CAIL	JORT				
		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Conce	ntric to	o/s	BOM/Route	$\vdash$	Hardwa	re		Over/Under	r tolerance	Temperature/Cure
		Cracks				Broken/Damaged		-	ion Incomplete		Part Incorre	<del></del>	Weld
		Crushed/	Crimped.			Burrs		<b>⊣</b> '	ions Incomplete/	Unclear	Part Lost/M	<b> </b>	Wrong Stock Pulled
		Cuffs	•			Contamination		Mainte			Part Moved	-	-
		Heat Trea	it			Countersink		Mislabe	eled		Positioned	Wrong	
	Г	Inspection	n Strip in	Tube		Cut Too Short		Misread	1		Power Loss,	/Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	91430
Description: Support Gusset	Part Number:	D3929-1
Inspection Dwg: D3929 Rev: A		Page 1 of 1

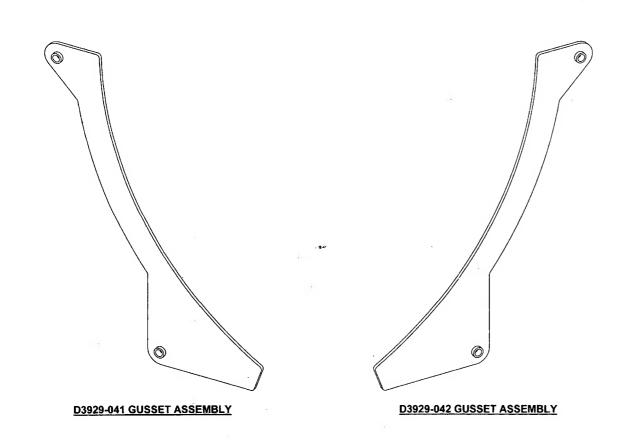
## FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.375	+0.006/-0.001	0.377	_		11	nner
0.500	+/-0.010	~498"	-		Ü	
0.500	+/-0.010	0,50			Ü	
4.036	+/-0.010	4.036	_		V	
4.382	+/-0.010	4.382"	_		V	
8.274	+/-0.010	8.274	-		ν	Produsoz
10.915	+/-0.010	10.916"	_		V	
1.000	+/-0.010	F00.	~		U	
11.198	+/-0.010	11,201	_		V	
0.500	+/-0.010	0.\$98	-		V	
1.572	+/-0.010	1.575"	-		V	
0.125	+/-0.010	A.117"	_		V	
					3-4	

Measured by: Tm	Audited by: 5mB	Prototype Approval:	N/A
Date: (2-10-19	Date: 10/9	Date:	N/A

Rev	Date	Change			y Approved
Α	09.05.27	New Issue	P/O D3929-041/-042	KJ ok	



QTY -041 QTY -042 ITEM P/N DESCRIPTION GUSSET ASSEMBLY
GUSSET ASSEMBLY D3929-041 D3929-042 2 D3907-1 1 D3929-1 BUSHING SUPPORT GUSSET

91630 \$12-10-16

Α	NEWISS	UE		мв	09.04.03		
REV.		- ,	DESCRIPTION	BY	DATE		
DESIGN		4	DART AEROSPA	ACE L	[D		
DRAWN		۸.	HAWKESBURY, ONTAR				
CHECK	CHECKED P		DRAWING NO.		REV. A		
MFG. AF	PPR.	M	D3929		SHEET 1 OF 3		
APPRO\	√ED	MA	TITLE		SCALE		
DE APP	R.	7	GUSSET ASSEMBLY		NTS		
DATE	09.0	4.03	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS REWATE AND COMPOSITION HOUS IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE LISED FOR AM PURPOSE OR COMPOSE OR COMMANDATION TO AM OTHER PURSON WITHOUT				

D

NOTES:
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3929-04X" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT: 0.73 lbs EACH
8) WELDING: PER DART QSI 004

